CLAIMS

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1. A composition comprising 3-carboxymethylsulfinyl-7-fluoro-3-methyl-4-quinolone having the corresponding structure:

$$F \xrightarrow{Q \qquad Q \qquad S \qquad CO_2H} CH_3$$

- 2. A method, comprising:
 - a) providing:
 - i) 3-cyanomethylthio-7-fluoro-1-methyl-4-quinolone; and
 - ii) a first acid;
- b) reacting said 3-cyanomethylthio-7-fluoro-1-methyl-4-quinolone and said first acid under conditions such that 3-carboxymethylthio-7-fluoro-1-methyl-4-quinolone is produced.
- 3. The method of Claim 2 further comprising: c) reacting said 3-carboxymethylthio-7-fluoro-1-methyl-4-quinolone with; i) a second acid and ii) a peroxide under conditions such that 3-carboxymethylsulfinyl-7-fluoro-1-methyl-4-quinolone is produced.